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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,134

05/26/2005

Karl-Heinz Wilzer

P/37-182

1953

2352 7590 08/08/2007
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EXAMINER

LISTVOYB, GREGORY

ART UNIT

PAPER NUMBER

1711

MAIL DATE

DELIVERY MODE

08/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,134

Applicant(s)

WILZER, KARL-HEINZ

Examiner

Gregory Listvoyb

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SP-08)
Paper No(s)/Mail Date 10/509,134
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Check

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of method for polyamide, Claims 1-4 production in the reply filed on Office Action from 3/08/2007 is acknowledged.

Claims 5-7 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected apparatus for polyamide production, there being no allowable generic or linking claim.

The Election is made FINAL.

Claim Rejections - 35 USC § 112

Claim 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, claim 2 states " a reflux column outside the limit of the method". This statement is not clear.

Claim Rejections - 35 USC § 102

Claims 1-3 rejected under 35 U.S.C. 102(b) as being anticipated by Wiltzer et al (US 6107449) herein Wiltzer.

Wiltzer discloses a method for the continuous production of copolyamide and polyamide, the starting material of which consists of the salt of hexamethylenediamine with adipic acid (AH salt) and water and, in the case of copolyamide, additionally of lactam, comprising a first stage of the method, which is carried out under pressure at temperatures between 180 and 280°C (see Column 1, line 40), the prepolymer being fed, after passing through the first stage of the method, to at least one further stage of the method, from which the evaporated water is removed and/or is expelled with inert gas (see column 1, line 40), characterized in that the water evaporating in the first stage of the method, with reaction components contained therein, is passed into the at least one further stage of the method and the expulsion of the water is effected only in the further stage or stages of the method.

In reference to Claim 2, Wiltzer discloses a reflux column, which separates caprolactam and water. Caprolactam returns to the reactor, whereas water wasted with nitrogen stream (see Working Example 3).

Regarding Claim 3, Wiltzer teaches 60-80% of AH-salt (see Claim 3).

Claim Rejections - 35 USC § 103

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Wiltzer.

Wiltzer discloses a method for the continuous production of copolyamide and polyamide (see discussion above).

Wiltzer teaches that water and reaction products are separated with reflux column, with following recycling of caprolactam back into a reactor.

Wiltzer does not teach that the temperature of the upper end of the column is less than 120C.

It is known that boiling point of water at atmospheric pressure is 100C. The other constituents of a vapor phase have much higher boiling point. Therefore, in order to effectively remove water, the temperature of the upper end of the column should be slightly above 100C (i.e. 105-110C). Higher temperature is unnecessary, since it leads to an additional energy consumption.

It would have been obvious to a person of ordinary skills of the art at the time the invention was made to set temperature of upper end of the reflux column at 105-110C to effectively remove water with efficient energy consumption.

Double Patenting

Claims 1-3 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3 of U.S. Patent No. 6107449. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the above claims are within the scope of limitations of the U.S. Patent No. 6107449.

In particular, Claim 1 of the above patent claims a method for the continuous production of polyamides or copolyamides from the same ingredients as ones in the Application. Process takes place at high pressure within the same temperature range. Water is driven out with inert gas.

Claim 3 of the above patent claims the amount of AH-salt, which overlaps with the corresponding range of AH salt content in the Application examined.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory Listvoyb whose telephone number is (571) 272-6105. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Listvoyb
Examiner
Art Unit 1711

GL



James J. Seidleck
Supervisory Patent Examiner
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